

System for fastening the barrel of a rifle having a replaceable barrel

5 This invention relates to a system for fastening the barrel of a rifle with a replaceable barrel, the system consisting of a lock frame, into which the barrel socket can be inserted into position and locked by a bolting device.

10 Practice has shown that it is desirable to replace the barrel of hunting guns for different purposes and calibres. Low-calibre guns, such as small-bore rifles in particular, comprising three different cartridges, 22 LR, 22 Win.Mag and the relatively recently launched model 17 HMR, lead to a need for using all of these in the same gun.

15 In prior art, the barrels are clamped into a split lock frame around the barrel socket by means of two or more clamping screws. The purpose of this invention is to provide a new type of system for fastening the barrel of a rifle with replaceable barrel, which is characterised by the bolting device consisting of a barrel block stop in the top of the locking frame, a groove in the barrel socket being insertable into this stop when the barrel is clamped into locking position.

20 Various embodiments of the invention are described in the dependent claims of the set of claims.

25 The invention allows for rapid, reliable and simple replacement of the barrel of a rifle with the desired calibre barrel. Should the barrel for some reason fail to settle in the correct place, the operating system of the gun becomes inoperative. The bolt lock and the cartridge extractor should necessarily settle correctly, and this happens on the sole condition that the barrel has been correctly clamped in position.

30 The invention is explained by means of an example below, with reference to the accompanying drawings, in which

Figures 1, 2 and 3 illustrate the installation of the barrel in the gun,
Figure 4 illustrates the same as figure 2, being a partial enlargement and section of
35 the lock frame, and
Figure 5 shows a part of figure 4 with the barrel in locked position.

The system for fastening the barrel 1 consists of a lock frame 2, into which the barrel socket 5 can be inserted into position and locked by a bolting device. The bolting device consists of a stop 4 for blocking the barrel 1 provided at the top of the lock frame 2, a groove 6 in the barrel socket 5 being insertable into the stop
5 when the barrel is clamped into locking position. The block stop 4 is a separate tempered arcuate claw fastened to the lock frame 2. The arcuate portion fits into the groove 6 provided in the socket 5 of the barrel 1 in the locked position, being prevented from moving forwardly. On the opposite side of the block stop 4, the lock frame 2 comprises a spring-loaded 7 support plate 9, under which a screw 9 is
10 provided for clamping the socket 5 of the barrel in the lock frame upwardly against the block stop 4. The opening of the lock frame 2 is shaped so as to allow the barrel socket 5 to be pushed into the lock frame 2 at a small angle, with the flange portion 3 of the groove in the barrel socket being allowed to pass by the block stop before the barrel is clamped into position. The lower side of the barrel socket 5, which
15 bears against the support plate 8, has been worked to a planar surface, so that the barrel settles at the correct angle around its axis during installation and clamping. The compression force exerted on the barrel socket will also be more regular when the locking screw 9 is tightened. One single tool, such as an ordinary hex key, is needed for the replacement of the barrel.

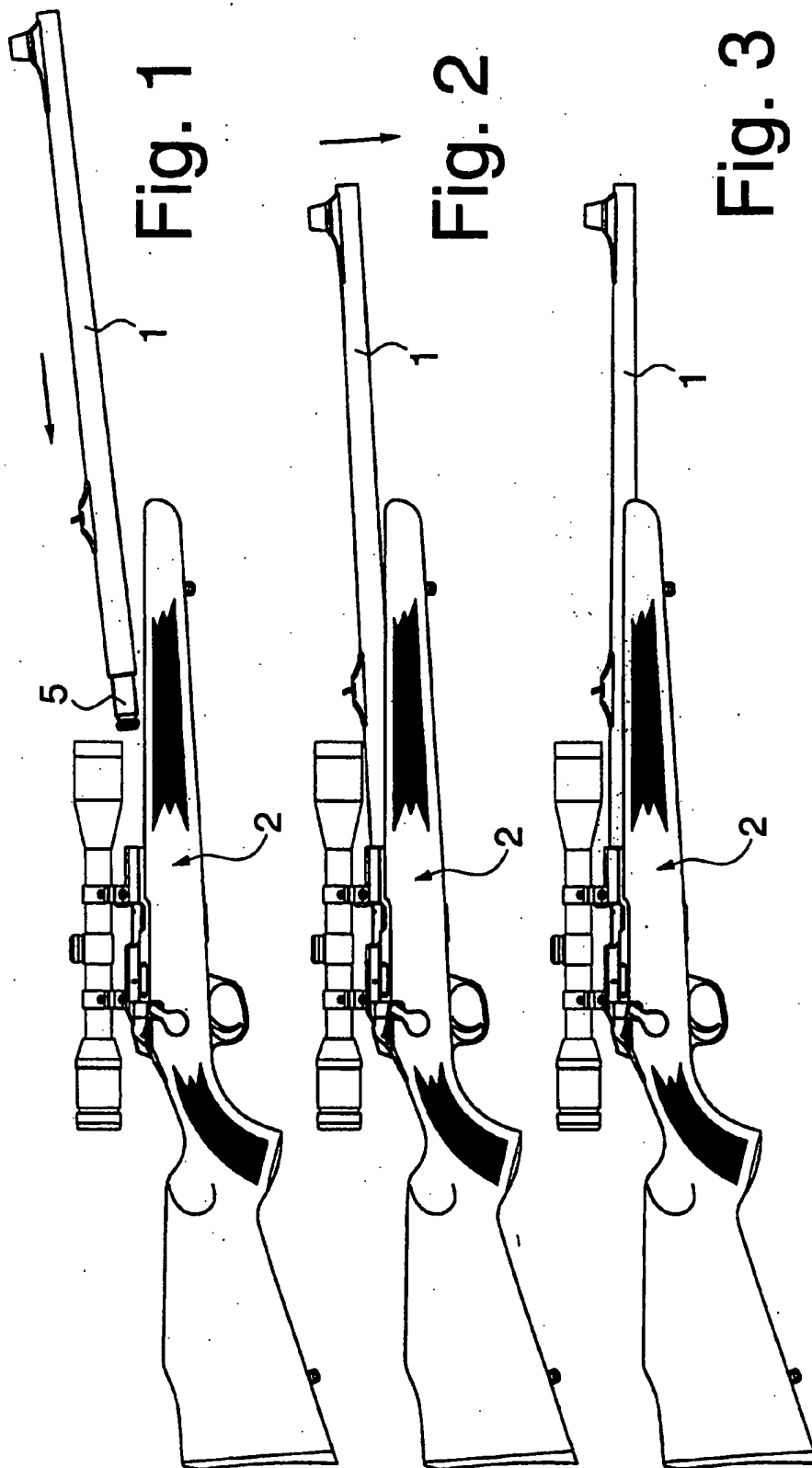
Claims

1. A system for fastening the barrel (1) of a rifle with replaceable barrel, the system consisting of a lock frame (2), into which the barrel socket (5) can be pushed into
5 position and locked with a bolting device, **characterised** in that the bolting device consists of a barrel block stop (4) provided at the top of the lock frame, a groove (6) in the socket (5) of the barrel (1) being insertable into the stop when the barrel is clamped into locked position.
- 10 2. A fastening system as defined in claim 1, **characterised** in that the block stop (4) is a separate tempered arcuate claw, which is fastened to the lock frame (2) and whose arcuate portion settles in a groove (6) in the barrel socket (5) in locked position.
- 15 3. A fastening system as defined in claim 1 or 2, **characterised** in that, on the opposite side of the block stop (4), the lock frame comprises a spring-loaded (7) support plate (8), under which a clamping device is provided, such as a bolting screw (9) tightened from the underside of the gun and allowing the barrel socket (5) to be clamped in the lock frame (2) upwardly against the block stop (4).
- 20 5. A fastening system as defined in any of the preceding claims, **characterised** in that the opening in the lock frame (2) has been shaped such that the barrel socket (5) can be pushed into the lock frame at a small angle, with the flange portion (3) of the groove (6) in the barrel socket being allowed to pass by the block stop (4) before the
25 barrel is clamped into position.
5. A fastening system as defined in any of the preceding claims, **characterised** in that the underside of the socket (5), which bears against the support plate (8), has been worked to a plane surface so that the barrel (1) settles at the correct angle
30 around its axis during installation and clamping.

Abstract

A system for fastening the barrel (1) of a rifle with a replaceable barrel, the system consisting of a lock frame (2), into which the barrel socket (5) can be inserted into position and locked by a bolting device. The bolting device consists of a barrel block stop (4) provided at the tip of the lock frame (2), a groove (6) in the barrel socket being insertable into the block stop when the barrel is clamped into locked position.

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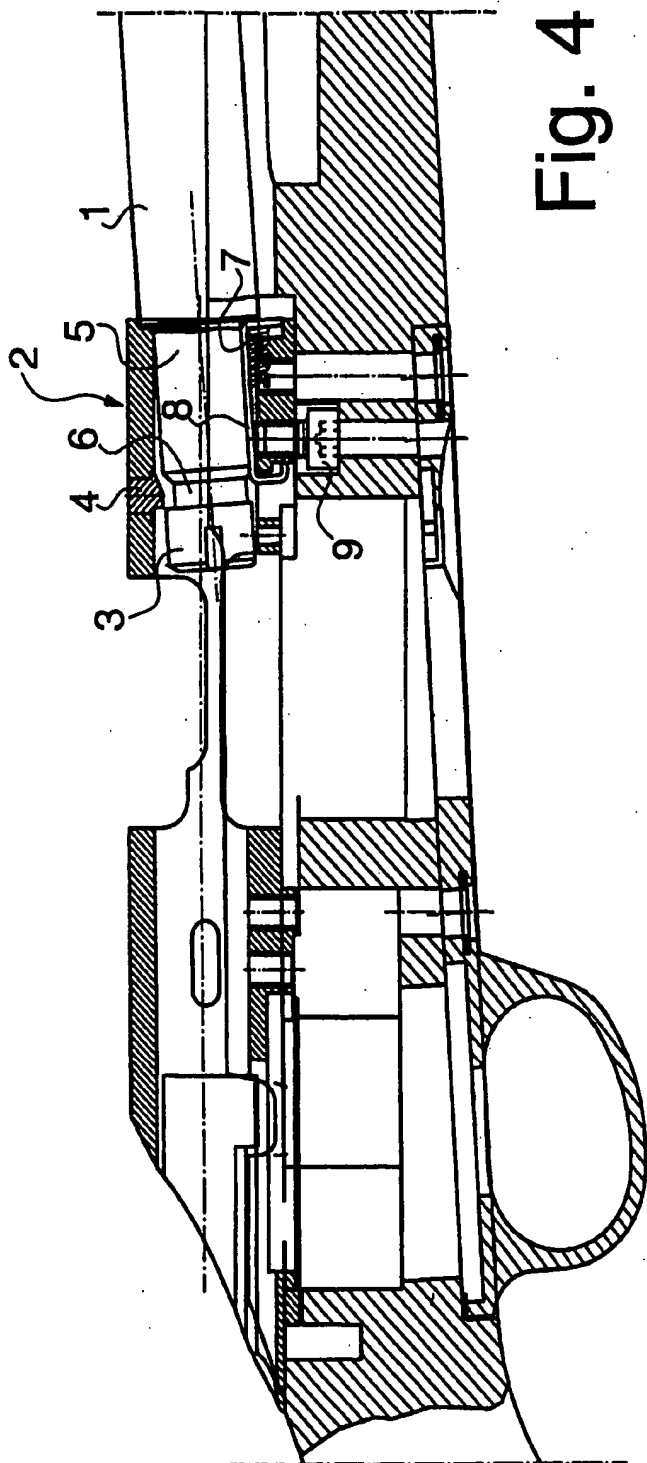


Fig. 4

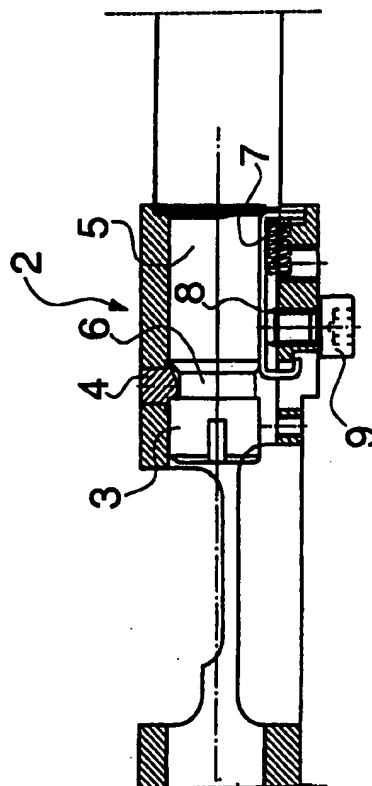


Fig. 5

INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 2005/050021

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: F41A 11/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: F41A

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 586495 A (THE BIRMINGHAM SMALL ARMS COMPANY LTD), 20 March 1947 (20.03.1947) --	1-5
X	US 1363262 A (T K NORTH, DEC'D), 28 December 1920 (28.12.1920)	1,3-5
A	 -----	2

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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INTERNATIONAL SEARCH REPORT

Information on patent family members

01/04/2005

International application No.

PCT/FI 2005/050021

GB	586495	A	20/03/1947	NONE		

US	1363262	A	28/12/1920	FR	502771 A	26/05/1920
				GB	131104 A	14/08/1919
